

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

<b>CARPENTER TECHNOLOGY CORP.,</b>	:	<b>CIVIL ACTION</b>
<b>Plaintiff</b>		:
	:	
<b>v.</b>	:	<b>NO. 08-2907</b>
	:	
<b>ALLEGHENY TECHNOLOGIES</b>	:	
<b>INC., et al.,</b>	:	
<b>Defendants</b>		

**M E M O R A N D U M**

**STENGEL, J.**

**September 29, 2011**

Carpenter Technologies, Inc. (“Carpenter”) and Allegheny Technologies, Inc. and ATI Properties, Inc. (collectively, “ATI”) are business competitors in the manufacture and sale of speciality alloys and other materials. Specifically, both make and sell nickel base 718 Alloy ingots. ATI asserts rights under two patents, the ‘546 patent and the ‘858 patent. Carpenter claims the patents are invalid because the product in question was offered for sale before the patent issued. This opinion addresses whether the “on-sale bar” applies. The parties have filed cross-motions for summary judgment on the issue of the on-sale bar. Carpenter has filed a motion for summary judgment of invalidity due to the on-sale bar of the ‘564 patent, Claims 1-11, 13, 14, 16-18, 21, and 27-31, and the ‘858 patent, Claims 1, 3, 5-8, and 13-16. ATI has filed a motion for summary judgment on Counts III and IV of the Second Amended Complaint and on the fourth additional defense to Carpenter’s counterclaims regarding the on-sale bar. For the reasons set forth below, I will deny the motions.

## I. BACKGROUND

On July 9, 2002, the United States Patent and Trademark Office (“PTO”) issued U.S. Patent No. 6,416,564 (“the ‘564 patent”), a “Method for Producing Large Diameter Ingots of Nickel Base Alloys.” ATI is the owner of the ‘564 patent. On April 13, 2004, the PTO issued U.S. Patent No. 6,719,858 (“the ‘858 patent”) for “Large Diameter Ingots of Nickel Base Alloys.” ATI is the assignee of the ‘858 patent.

On November 14, 2003, ATI sent a letter to Carpenter notifying it of ATI’s rights under the ‘564 patent and attaching a copy of the patent.<sup>1</sup> On March 9, 2005, ATI sent a second letter to ATI restating its ownership of the ‘564 patent and notifying Carpenter of the issuance of the related ‘858 patent. This letter specifically articulated ATI’s concern that Carpenter “may be manufacturing and selling large diameter triple-melted 718 nickel alloy ingots greater than 30 inches in diameter, including up to 36 inches in diameter.” Letter dated Mar. 9, 2005, Exh. D. to Am. Compl. It also requested that Carpenter “review the subject patents and let [ATI] know in what ways the [Carpenter] process differs from our patented process.” Id.

On June 23, 2008, Carpenter filed this declaratory action against ATI, seeking a finding that it has not infringed the ‘564 and ‘858 patents (Am. Compl. Counts I & II), that the two patents are invalid (Counts III & IV), that the two patents are unenforceable

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<sup>1</sup> The letter states in part:

It has come to our attention that companies involved in the manufacture of ingots, forgings, or gas turbines may be considering either the manufacture, use, or sale of product using large diameter triple-melted 718 nickel alloy ingots greater than 30 inches in diameter, including up to 36 inches in diameter.

You should be aware that [ATI] owns [the ‘564 patent] and related pending patent applications covering the manufacture, use, and sale of such large diameter nickel-base ingots.

Letter dated Nov. 14, 2003, Ex. C to Am. Compl.

(Counts V and VI), and antitrust and Lanham Act unfair competition claims (Counts VII and VIII).

Following this Court's resolution of a motion to dismiss the original complaint, Carpenter amended its complaint twice and the same causes of action remain. ATI filed an answer and counterclaim. Count I of its counterclaim alleges infringement of the '564 patent and Count II alleges infringement of the '858 patent. In its answer to ATI's counterclaim, Carpenter asserted as its fourth defense the invalidity of the patents due to, among other things, the on-sale bar.

The parties have completed discovery and filed multiple motions for summary judgment. Carpenter has filed a motion for summary judgment of invalidity of numerous claims in the two patents due to operation of the on-sale bar. ATI has also filed a motion for summary judgment in its favor on Counts III and IV of Carpenter's amended complaint and on Carpenter's on-sale bar defense to ATI's infringement counterclaims.

## **II. STANDARD OF REVIEW**

Summary judgment is proper "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." FED. R. CIV. P. 56(a). A factual dispute is "material" only if it might affect the outcome of the case. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). For an issue to be "genuine," a reasonable fact-finder must be able to return a verdict in favor of the non-moving party. Id.

A party seeking summary judgment initially bears responsibility for informing the court of the basis for its motion and identifying those portions of the record that it believes demonstrate the absence of a genuine issue of material fact. Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986). A party asserting that a fact cannot be or is genuinely disputed must support the assertion by citing relevant portions of the record, including depositions, documents, affidavits, or declarations, or showing that the materials cited do not establish the absence or presence of a genuine dispute, or showing that an adverse party cannot produce admissible evidence to support the fact. FED. R. CIV. P. 56(c). Summary judgment is therefore appropriate when the non-moving party fails to rebut the moving party's argument that there is no genuine issue of fact by pointing to evidence that is "sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." Celotex, 477 U.S. at 322; Harter v. GAF Corp., 967 F.2d 846, 852 (3d Cir. 1992).

### III. DISCUSSION

#### A. The On-Sale Bar

The Patent Act provides that "[a] person shall be entitled to a patent unless . . . the invention was . . . on sale in this country . . . more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). This limit on patentability, known as the on-sale bar, reflects a balancing of the need to exclude from the patent process inventions which are already in the public domain, and an inventor's right "to control whether and when he may patent his invention." Pfaff v. Wells Elecs.,

Inc., 525 U.S. 55, 64-65 (1998). The on-sale bar originally “preclude[d] patentability [of a product] if the invention had been placed on sale *at any time* before the patent application was filed.” Id. (emphasis added). Congress later relaxed its operation, allowing for a one year “grace period” in which an inventor can file a patent application for an already-on-sale product. See 35 U.S.C. § 102(b).

What is called the “critical date” for purposes of the on-sale bar is therefore one year prior to the application date of the patent. If the following two conditions occur *before* the critical date, then the on-sale bar applies and the inventor has lost his right to the patent: (1) the product is the subject of a commercial offer for sale; and (2) the invention is ready for patenting. Pfaff, 525 U.S. at 67.

A patent is presumed to be valid, and “that presumption can be overcome only by clear and convincing evidence of facts to the contrary.” Poly-America, L.P. v. GSE Lining Tech., Inc., 383 F.3d 1303, 1308 (Fed. Cir. 2004) (citing 35 U.S.C. § 282). In other words, Carpenter faces a high burden: “[t]he facts supporting the claim that a patent is invalid in view of the on-sale bar must be proved by clear and convincing evidence.” Id. (citation omitted).

The first prong of the Pfaff test has two sub-parts: in order to find that the product was “on sale” the reviewing court must ensure (1) that there was a “commercial offer” and (2) that it was an offer for the patented invention. Scaltech, Inc. v. Retec/Tetra, LLC, 269 F.3d 1321, 1328 (Fed. Cir. 2001) (“Scaltech III”). Stated differently, “[t]he ‘invention’ which has been offered for sale must . . . be something within the scope of the claim.” Scaltech, Inc. v. Retec/Tetra, LLC, 178 F.3d 1378, 1383 (Fed. Cir. 1999)

(“Scaltech II”). For the invention to be within the scope of the claim, the subject of the barring activity must “[meet] each of the limitations of the claim and [be] an embodiment of the claimed invention.” Id. “It is sufficient to show that one embodiment of the invention was offered for sale during the one-year period.” Scaltech III, 269 F.3d at 1330.

With respect to the commercial offer requirement, “[o]nly an offer which rises to the level of a commercial offer for sale, one which the other party could make into a binding contract by simple acceptance (assuming consideration) constitutes an offer for sale[.]” Id. at 1328 (citing Group One, Ltd. v. Hallmark Cards, Inc., 254 F.3d 1041, 1048 (Fed. Cir. 2001)). It has long been recognized that commercial transactions, which have the potential to subject an inventor to operation of the on-sale bar, must be distinguished from experimental transactions and activities, which do not bar patentability. See Atlanta Attachment Co. v. Leggett & Plant, 516 F.3d 1361, 1365 (Fed. Cir. 2008) (citing Elizabeth v. Am. Nicholson Pavement Co., 97 U.S. 126, 137, 24 L.Ed. 1000 (1877)) (“While ‘[a]ny attempt to use [an invention] for profit . . . would deprive the inventor of his right to a patent,’ an inventor’s use ‘by way of experiment’ does not bar patentability.”).

The recognition that experimental transactions do not trigger the on-sale bar is known as the “experimental use doctrine.” The Federal Circuit has explained that:

[T]he question posed by the experimental use doctrine . . . is not whether the invention was under development, subject to testing, or otherwise still in its experimental stage at the time of the asserted sale. Instead, the question is whether the transaction constituting the sale was not incidental to the primary purpose of experimentation,

i.e., whether the primary purpose of the inventor at the time of the sale, as determined from an objective evaluation of the facts surrounding the transaction, was to conduct experimentation.

Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1352 (Fed. Cir. 2002). “If the sale was primarily for experimentation rather than commercial gain, then the sale is not invalidating under § 102(b).” Electromotive Div. of Gen. Motors v. Transp. Sys. Div. of Gen. Elec., 417 F.3d 1203, 1210 (Fed. Cir. 2005). In other words, “[t]he experimental use doctrine . . . can negate what otherwise would be subject to an on-sale bar under the statute.” Robert Bosch GmbH v. Haynes Corp., No. 1: 05-CV-2376, 2006 WL 3463427 at \*4 (N.D. Ohio Nov. 29, 2006) (citing Pfaff, 525 U.S. at 67). If there is sufficient proof that a product was “sold primarily for experimentation,” the first prong of the Pfaff test requiring commercial sale would not be met, and it would be “unnecessary to consider either whether the device was an embodiment of the claimed invention or whether the invention was ‘ready for patenting’ at the time of the sales.” Allen Eng'g, 299 F.3d at 1353. “A use can be experimental only if it is designed to (1) test claimed features of the invention or (2) to determine whether an invention will work for its intended purpose[.]” Clock Spring, L.P. v. Wrapmaster, Inc., 560 F.3d 1317, 1327 (Fed. Cir. 2009) (citing In re Omeprazole Patent Litig., 536 F.3d 1361, 1373-75 (Fed. Cir. 2008)).

With respect to the second prong of the Pfaff test requiring that an invention is ready for patenting, this can be shown by “proof of reduction to practice before the critical date” or “by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.” Pfaff, 525 U.S. at 67-68.

**B. The ‘564 and ‘858 Patents**

The ‘564 patent describes an improved “method for producing ingots of nickel based superalloys, including Alloy 718 and other nickel base superalloys experiencing significant segregation during casting, and wherein the ingots have a diameter greater than 30 inches and are substantially free of negative segregation, are free of freckles, and are free of other positive segregation.” See U.S. Patent No. 6,416,564, Ex. A to Am. Complaint.

The summary of the invention describes numerous steps: first, “a nickel base superalloy” is cast in a mold using vacuum induction melting (VIM); second, the “[t]he cast ingot is . . . annealed and overaged by heating the alloy at a furnace temperature of at least 1200 [degrees Fahrenheit] for at least 10 hours;” third, the ingot is transferred “to a heating surface within 4 hours of complete solidification” and subjected to a “post-electroslag remelting” (“ESR”) heat treatment; and finally, it is vacuum arc remelted (“VAR”) to produce a VAR ingot. Creating an ingot using VIM, ESR, and VAR heat treatments is known as the “triple melt” (“TM”) process. The invention background explains that the patented process is novel because, although it creates an ingot using a known alloy (Alloy 718) and a known process (the TM process), it allows for creation of ingots in larger diameters than previously achieved using the 718 Alloy and others similar to it. Creation of ingots in these large diameters is difficult because “[t]he melting of large superalloy ingots accentuates a number of basic metallurgical and processing related issues” including “the tendency towards positive and negative segregation.” The

‘858 patent, which was issued on April 13, 2004, is for “Large Diameter Ingots of Nickel Base Alloys.” It is designated as a division of the ‘564 patent. See Ex B. To Am. Compl.

The critical date for the “on-sale bar” for both patents is March 8, 2000. Carpenter SMF in Support of Motion for Summary J. Due to On-Sale Bar (“Carpenter SMF re: On-Sale Bar”) ¶ 8. In its motion, Carpenter argues that both the ‘564 patent and the ‘858 patent “describe and claim products and processes that were reduced to practice and commercially on sale in the U.S. by ATI to [GE]<sup>2</sup> well before the critical date.” Carpenter Br. in Support of Motion for Summary J. Due To On-Sale Bar (“Carpenter On-Sale Mot.”), 5. Anticipating an experimental use defense, Carpenter also claims that such a defense would not apply here because the primary purpose of ATI’s sale of the product to GE was commercial, not experimental. In its motion, ATI claims the opposite, focusing in large part on its contention that ATI did not make an invalidating commercial offer for sale.

### C. **Carpenter Claims the On-Sale Bar Invalidates Both Patents**

In support of its claim, Carpenter cites five separate sales of Alloy 718 ingots made by ATI to GE or GE forgers prior to March 8, 2000 that it claims render the ‘564 and ‘858 patents invalid.<sup>3</sup>

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<sup>2</sup> The parties and deponents refer interchangeably to General Electric (GE), General Electric Power Systems Division (“GEPS”) and a GE forger, Wyman-Gordon, as the buyer of the ATI-produced ingots relevant in this case. For simplification, I will refer to this entity as “GE” throughout this memorandum.

<sup>3</sup> Carpenter refers to multiple other ingots in its Statement of Material Facts and in its Memorandum. However, it cites only four distinct sales as being subject to the on-sale bar. I will not consider whether other ingots, which were produced but not alleged to have been sold, triggered the bar.

## 1. The “30 inch” Ingots

The first three sales were, as Carpenter describes them, of (1) a “30 inch VAR 718 TM ingot” designated Heat 165G-1<sup>4</sup> to GE in June 1999; (2) a “30 inch TM 718 ingot” designated Heat FR18 to Wyman-Gordon (a GE forging supplier) in September 1999; and (3) a “30 inch VAR 718 TM ingot” designated Heat FP-10. Carpenter SMF re: On-Sale Bar, ¶¶ 9, 33, 52; Carpenter On-Sale Mot., 19-20. Carpenter claims that Heat 165G-1 was “produced with a process that includes all the steps of claims 1, 4-14, 16-18, 27, 30, and 31 of the ‘564 Patent and anticipated Claim 13 of the ‘858 Patent.” Carpenter On-Sale Mot., 6. It claims Heat FR 18 was “produced with a process that includes all the steps of claims 1, 5-11, 13, 14, 16-18, 27, and 31 of the ‘564 Patent and anticipates Claim 13 of the ‘858 Patent.” *Id.* Finally, it claims that Heat FP-10, which is documented as a sale from ATI to GE but does not include an amount paid, “was produced with a process that includes the steps of claims 1, 4-11, 13, 14, 16, 18, 27, 30 [and] 31 of the ‘564 Patent . . . and anticipates Claim 13 of the ‘858 Patent.” *Id.* at n. 13. In support of this argument, Carpenter cites a chart prepared by counsel comparing the processes used to create Heats 165G-1, FR 18, and FP-10 as set forth in the heat file documentation with the claims of the ‘564 patent. See Ex. A to Carpenter On-Sale Mot.

With respect to the 30-inch ingots, ATI responds that the claims of the patents “do not read upon the methods used to make any of the ingots associated with heats 165G-1,

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<sup>4</sup> The precise parameters used in manufacturing an ingot can be found in documentation unique to that ingot. This documentation is known as a “heat file” and the heat file for each ingot produced has its own alpha-numeric code.

FR18-1, and FP10-1.” ATI Resp. In Opp’n to Carpenter On-Sale Mot. (“ATI On-Sale Resp.”), 10. Specifically, it claims that “there were certain critical transfer and holding steps set forth in claims 1 and 27 of the ‘564 Patent, and claim 13 of the ‘858 Patent that ATI did not perform in heats 165G-1, FR18-1, and FP10-1.” ATI also argues that because “all the other claims in the ATI Patents that Carpenter seeks to invalidate are dependent on claims 1 and 27,” Carpenter has no argument for invalidating them, either. ATI cites the testimony of Betsy Bond, the named inventor on the patents, who attests that she has “personal knowledge of the process for the production of certain triple-melt ingots by ATI, including . . . heats 165G-1, FR18-1 [and] FP10-1[.]” Bond Decl. ¶ 4, ATI On-Sale Resp. Ex. 1. In her affidavit, Ms. Bond testifies that the 30-inch ingots “were not and could not have been 30 inches in diameter at the time after the VAR process.” Bond Decl. ¶ 6. As she explains, the crucible ATI used to create these heats was smaller than 30 inches in diameter and therefore would have created an ingot also smaller than 30 inches in diameter. Secondarily, she asserts that the 30 inch ingots “did not utilize critical steps of the ATI patents.” Id. at ¶ 7. Specifically, she states that the process used to make the 30 inch ingots differed from the process claimed in the ‘564 patent in two important ways: first, because “the alloys made in [the three heats] were not completely solidified at the time of transfer” following the ESR step, and second, the ingots produced in these heats were not held in a heating furnace at a first temperature of 600 degrees F to 1800 degrees F for at least 10 hours, as described in the patents; rather, “they were held at the first temperature of 1150 degrees F for less than 7 hours.” Id. She asserts that these differences indicate that the three 30 inch ingots did not meet the

limitations of Claims 1, 4-14, and 16-18 of the ‘564 patent or Claim 13 of the ‘858 patent. Id. She attests that the process utilized to produce the 30 inch ingots also differs from the process set forth in Claims 27, 30, and 31 of the ‘564 patent. Id. at ¶ 8. Finally, she states that the heats for the three ingots did not utilize the cooling step of Claim 21 of the ‘564 Patent. Id. at ¶ 9.

Because Claims 1 and 27 of the ‘564 patent and Claim 13 of the ‘858 patent are not limited to ingots greater than 30 inches in diameter, I will not address whether Ms. Bond’s assertion that the “30 inch ingots” were actually less than 30 inches in diameter compels a finding that the ingots did not read upon the claims of the patents. This issue is immaterial, since, as set forth in the following sections, ATI has demonstrated that there is a genuine dispute as to whether the 30 inch ingots read upon claims 1 and 27 of the ‘564 Patent and claim 13 of the ‘858 Patent. Because Carpenter claims that the process used to create the 30-inch heats reads upon Claims 1 and 27 and Claim 13, and ATI has shown that, with respect to two limitations of those claims, a genuine dispute of fact exists, no further inquiry into whether the heats read upon the patents is necessary. See Scaltech II, 178 F.3d at 1383 (holding that “the first determination in the § 102(b) analysis must be whether the subject of the barring activity met each of the limitations of the claim, and thus was an embodiment of the claimed invention.”); see also Dana Corp. v. American Axle & Mfg., Inc., 279 F.3d 1372, 1375-76 (Fed. Cir. 2002) (“[A] court may not invalidate the claims of a patent without first construing the disputed limitations of the claims and applying them to the allegedly invalidating acts.”).

**a. There Is A Genuine Dispute Whether The 30-inch Heats Utilized the Transfer Process in Claims 1 and 27 of the ‘564 Patent and Claim 13 of the ‘858 Patent**

Claim 1 of the ‘564 Patent requires: “transferring the alloy to a heating surface within 4 hours of complete solidification[.]” ‘564 Patent, Column 14, Lines 36-37. Claim 27 of that patent requires “transferring the alloy to a heating surface within 4 hours of complete solidification after electroslag remelting.” Id. at Column 16, Lines 63-64. Claim 13 of the ‘858 patent requires “transferring the alloy to a heating surface within 4 hours of complete solidification.” ‘858 Patent, Column 15, Lines 14-15. Under the parties’ joint claim construction,<sup>5</sup> “transferring the alloy to a heating surface” entails “moving the alloy from the ESR process to a heating furnace for treatment.” Joint Claim Construction, 3. “Within 4 hours of complete solidification” means that “the alloy is hot transferred to the heating surface in less than or equal to 4 hours from the time that the entire ingot has cooled from liquid to solid.” Id.

As set forth above, Ms. Bond asserts that “the alloys made in [the 30 inch heats] were not completely solidified at the time of transfer” following the ESR step. ATI therefore argues that the heats do not read on Claims 1 and 27 of the patents requiring transfer within 4 hours of complete solidification. Carpenter replies that, even if this is true, Ms. Bond’s statement does not raise a genuine dispute because “there is no requirement in the patent that the ingot first completely solidify before transfer, and

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<sup>5</sup> No construction hearing was held in this case because the parties submitted a joint claim construction statement under which there were no disputed claim terms, phrases, or clauses. The parties specifically attested that due to their agreement concerning the meaning of the patents’ terms, no hearing was necessary.

transfer before solidification is necessarily ‘in less than’ 4 hours from the time the ingot solidified.” Carpenter On-Sale Reply, 10.

Carpenter’s argument ignores the plain language of the claim limitation. The phrase “within 4 hours of complete solidification” indicates, under the parties’ claim construction, that the ingot must be transferred “in less than or equal to 4 hours *from the time that the entire ingot has cooled from liquid to solid.*” (Emphasis added). A plain sense reading of this construction is that, only once the process of solidification has concluded, rendering the ingot completely solid, does the 4-hour period of time begin during which the ingot must be transferred to the heating surface. This necessarily requires that the ingot is completely solidified when the four hour period begins and remains solidified for transfer. If the ingots in the 30 inch heats were not completely solidified at the time of transfer, the process used to make them does not read upon Claims 1, 27, and 13 as the parties construed them. Therefore, accepting Ms. Bond’s affidavit as true, there is a genuine dispute whether the 30-inch heats utilized the transfer process set forth in claims 1, 27, and 13.

**b. There Is A Genuine Dispute Whether the 30-inch Heats Utilized the post-ESR Heating Process in Claims 1 and 27 of the ‘564 Patent and Claim 13 of the ‘858 Patent**

Claim 1 of the ‘564 Patent requires that after the above-described cooling process is complete and the ingot is transferred to a heating surface, it is held there “at a first temperature of [600° Fahrenheit to 1800° Fahrenheit] for at least 10 hours.” Column 14, lines 38-40. Claim 27 of the same patent requires that after the cooling process is

complete and the ingot is transferred to the heating surface, it is held there “at a first furnace temperature of [900° Fahrenheit to 1800° Fahrenheit for at least 10 hours.” Claim 13 of the ‘858 Patent requires “holding the alloy within the heating surface at a first temperature of [600° Fahrenheit to 1800° Fahrenheit] for at least 10 hours.” Under the parties’ joint claim construction, a first temperature is just that – “a first furnace temperature.” Joint Claim Construction, 3.

Ms. Bond states that the ingots produced in the 30 inch heats were not held in a heating furnace for at least 10 hours. Rather, she attests that “they were held at the first temperature of 1150 degrees F for less than 7 hours.” Carpenter responds simply that the ingots were *not* held for less than 7 hours and that instead, heat FP-10 was held for nearly 19 hours, heat 165G-1 was held for 21 hours, and heat FR-18 was held for 19 hours. Carpenter On-Sale Reply, 11 n. 11. Again, this is a genuine dispute of fact. Carpenter has failed to establish with clear and convincing evidence that the process used to make the 30-inch heats utilized the post-ESR heating process as set forth in the claims of the ‘564 and ‘858 patents.

## **2. The “36 inch” Ingots**

Carpenter claims that the final two invalidating sales were “sales for the production of a 36 inch 718 TM ingot and shipment of material from that ingot primarily for the purposes of commercial exploitation” on September 14, 1999 and February 28,

1999. Carpenter On-Sale Mot., 20.<sup>6</sup> The first, designated Heat 215G, allegedly reduced to practice all the claims of the ‘564 and ‘858 Patents and was offered for sale to GE on September 14, 1999. Carpenter SMF re: On-Sale Bar, ¶¶ 85, 93-96. The second, designated Heat 420G-1, also allegedly embodied all the claims of both patents and was offered for sale to GE on February 28, 2000. *Id.* at ¶¶ 147, 151. Carpenter does not contest that these two 36 inch ingots were developmental in nature. Rather, it appears to make two separate arguments for application of the on-sale bar. First, it argues that Plumtree Software, Inc. v. Datamize, LLC, 473 F.3d 1152 (Fed. Cir. 2006), which holds that the on-sale bar applies when a patentee performs each of the steps of the patented process before the critical date pursuant to a contract for sale, applies here. Carpenter On-Sale Mot., 21-22. Second, it argues that although the process used to create the ingots was in development, “ATI’s primary purpose . . . was clearly commercial exploitation of its process and the successful product it had already produced, not experimentation.” Carpenter On-Sale Mot., 23.

In ATI’s motion for partial summary judgment concerning the on-sale bar, it disputes the same issues. ATI’s motion does not address the 30-inch ingots, and instead focuses entirely on the 36-inch ingots. ATI claims that Carpenter’s on-sale bar defense to ATI’s counterclaim that it infringed the patents is without merit.

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<sup>6</sup> Carpenter refers in its motion to ATI’s production of a 34 inch 718 alloy ingot which allegedly reduced to practice multiple claims in the ‘858 patent. However, it does not include the 34-inch ingot in its claim comparison chart and does not claim that the 34-inch ingot triggered the on-sale bar. Rather, it claims that ATI’s success in producing the 34-inch ingot “resulted in ATI’s September 1999 offer to [GE].” Because Carpenter does not appear to claim that the 34-inch ingot was offered for sale prior to the critical date, I will not address whether it was an invalidating sale at all.

It appears beyond dispute that Heats 215G-1 and 420G-1 embodied the claims of the patents. Both are identified in the ‘564 patent and in the ‘858 patent as “VAR ingots . . . prepared by the method of the present invention and inspected.” ‘564 Patent Col.12:25-27 & Chart; ‘858 Patent Col. 12:25-27 & Chart. ATI admits that “the process used in Heat 215G-1 reduced to practice the claimed invention” of both the ‘564 and the ‘858 Patents on December 11, 1999.” ATI Resp. To Carpenter SMF re: On-Sale Bar ¶¶ 93, 94. Therefore, the question presented here is not whether the 36-inch ingots embodied the claims of the patents but rather whether there was a commercial offer for sale of the patented process and, if so, whether the experimental use doctrine negates sales that would otherwise be subject to the on-sale bar.

In support of its argument that the 36-inch ingots activated the on-sale bar, Carpenter relies on letters Art Kracke, ATI’s Director of Marketing and Business Development, sent to GE on September 14, 1999 and February 28, 2000. See Carpenter On-Sale Mot., 20-21 (citing the letters for the proposition that “[a]t least two sales for the production of a 36 inch 718 TM ingot and shipment of material from that ingot primarily for the purpose of commercial exploitation were made by ATI to GEPS[.]”).

The body of the September 14, 1999 letter states in full:

[ATI] is pleased to quote [GE] on the following scope of work.

- [ATI] will produce a 36” 718TM ingot utilizing three VAR melt rates.
- A top macro slice will be cut and macro inspection performed.
- The ingot will be billetized to 10” diameter.
- The 10” billet will be ultrasonically inspected to a #2FBH.

- Macro and micro evaluation will be performed on the billet.
- The results of the evaluation will be discussed with [GE] to determine the next step in this part of the larger ingot program.
- a 10" diameter x 30" long sample will be shipped to a forging source of [GE's] selection for pancake forging if the billet is determined to be acceptable.

The price for this development effort is \$70,000.

This is a process development program. The quoted price is for the development work. No material will be shipped with the exception of the material for pancake forging as described above.

Carpenter On-Sale Mot. Ex. M. When questioned about the letter, Mr. Kracke corrected opposing counsel's characterization of the letter as a "proposal for a 36-inch 718 alloy triple-melt ingot." Kracke Dep. 54:24-55:3, Oct. 27, 2009. He stated that the letter was rather "a quotation to them for development work that would take place on what we were doing on a 36-inch ingot" and that "[n]o product would ship." Id. at 55:5-7. When questioned about the \$70,000 price for the work, Mr. Kracke explained that "[ATI] was doing this development. Any monies that GE paid were helping fund the development, in part. So it was an offsetting amount to the cost of the work we were doing." Id. at 55:19-22. He affirmed that ATI "had expenses related to the development of the 36-inch ingot that were not covered by GE." Id. at 55:23-56:1.

The second letter, entitled, "36" 718 TM Development, Second Trial," was sent by Mr. Kracke to GE on February 28, 2000. The bullet-pointed section and the three sentences following it are identical in the first and second letters. The only additions to the second letter are two sentences at the end stating, "[i]nvoicing will occur immediately

after billetizing. [ATI's] standard terms and conditions will apply.” Carpenter On-Sale Mot. Ex. N.

In its response to Carpenter’s motion, ATI claims that Carpenter’s on-sale bar argument fails for two reasons: first, the quotations it made to GE for the 36-inch ingots “were not offers to sell the patented invention” and were instead quotes “for ‘development work’ to further investigate the feasibility of producing quality ingots[.]” ATI On-Sale Resp., 13. Second, it claims that even if the quotations were commercial offers for sale, the ingots “were primarily ‘experimental,’ and therefore do not trigger an on-sale bar.” *Id.* at 12. In its own motion, ATI presents more specific arguments, claiming other pieces of evidence support its assertion that the quotations were not offers for sale, and that, even if the quotations were offers for sale, they were not specific enough to encompass the claim limitations in the claims of the ATI patents.

**a. There is a Genuine Dispute Whether ATI’s Quotes to Carpenter Were Commercial Offers for Sale**

Carpenter characterizes the September 1999 and January 2000 letters interchangeably as “sales,” and “offers.” See Carpenter On-Sale Mot., 20-23. The parties here are in dispute over the meaning of a recent Federal Circuit decision fleshing out the commercial sale requirement of the Pfaff test.<sup>7</sup> In this case, Plumtree Software,

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<sup>7</sup> I note that ATI claims the Court’s reasoning in Plumtree reversing the District Court’s grant of summary judgment because there was insufficient evidence of a commercial sale or offer for sale of the patented invention, was dicta. As Carpenter correctly observes, the court’s consideration of both theories supporting the existence of a commercial offer for sale was not dicta; it was necessary to resolve the appeal. Had the court found that either

473 F.3d 1152, the Federal Circuit reversed the District Court's decision granting summary judgment against the assignee of a patent on the ground that the on-sale bar invalidated the patent. It found that there was an issue of fact whether the inventor made an invalidating sale of the patented process prior to the critical date. See id. at 1162. The court then observed that the first prong of the Pfaff test could be met under either of two alternative theories. First, a patent-invalidating commercial offer is made if "before the critical date [the inventor] made a commercial offer to perform the patented method." Id. Second, a patent-invalidating offer is made if "before the critical date [the inventor] in fact performed the patented method for a promise of future consideration." Id.

In other words, under either theory, there must be a commercial offer. "A commercial offer is 'one which the other party could make into a binding contract by simple acceptance (assuming consideration).'" Plumtree, 473 F.3d at 1162 (citing Group One Ltd. v. Hallmark Cards, Inc., 254 F.3d 1041, 1048 (Fed. Cir. 2001)). Federal courts are to look to the language used by the parties to determine whether an offer was intended. Group One, 254 F.3d at 1048 ("Language suggesting a legal offer, such as 'I offer' or 'I promise' can be contrasted with language suggesting more preliminary negotiations, such as 'I quote' or 'are you interested.'"). It is also appropriate to look to the circumstances surrounding the making of the offer, "including the context of any prior communications or course of dealing between the parties; whether the communication was private or made to the public; whether the communication comes in

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theory could be utilized by Plumtree to show application of the on-sale bar, the District Court's opinion would have been affirmed.

reply to a specific request for an offer; and whether the communication contains detailed terms.” Honeywell International, Inc. v. Nikon Corp., 672 F. Supp. 2d 638, 643 (D.Del. 2009) aff’d 2010 WL 4386966 (Fed. Cir. Nov. 10, 2010). Actual acceptance of the offer is not required to implicate the on-sale bar. See Scaltech, 269 F.3d at 1328.

i. The First Theory in *Plumtree* Does Not Apply

Under the first theory articulated in Plumtree, “the offeror must be legally bound to perform the patented method if the offer is accepted.” 473 F.3d at 1162 (internal citation omitted). In Plumtree, the court concluded that, because the written agreement between the inventor and the seller to perform the allegedly patented process “did not unambiguously require use of the patented method,” it did not provide a basis finding that the on-sale bar applied. Because the letters here did not unambiguously require use of the patented method, they were not commercial offers under the first theory articulated in Plumtree.

ii. The Second Theory in *Plumtree* Applies

The second theory in Plumtree applies where the offer did not specifically require the offeror to make the patented product or use the patented process, but where the patented product or process is embodied in the offer nonetheless. Under the second theory, the alleged infringer can prevail if it demonstrates that, prior to the critical date, “[the inventor] in fact performed each of the steps of the patented process . . . pursuant to the contract.” Plumtree, 473 F.3d at 1163. In order to establish a disqualifying sale

under the second theory, “the invention that is the subject matter of the offer for sale must satisfy each claim limitation, though it may do so inherently.” Scaltech III, 269 F.3d at 1329.<sup>8</sup> “Inherency is established if ‘the natural result flowing from the operation as taught would result in the performance of the questioned function[.]’” Id. (citation omitted).

It is under the second Plumtree theory that Carpenter claims ATI’s conduct falls. ATI made an offer to sell “development work” to GE on a 36 inch ingot. Regardless of whether the entire ingot was shipped to GE (which it admittedly was not) or samples of the ingot were shipped to GE, the ingot had to be made in order to cut off and send samples. In the patent itself, Heat 215G, the ingot which was made for development and sampling purposes, is identified as a “VAR ingot[] of Allvac 718 material having [a] diameter greater than 30 inches [and] prepared by the method of the present invention and inspected.” ‘564 Patent, Col. 12:25-28. Carpenter demonstrates that ATI performed each of the steps of the patented process pursuant to the contract. Although the contract did not require the *sale* of the entire ingot, it did require the production of the ingot, insofar as samples of that ingot were to be provided to GE.

ATI argues that there was no sale or offer to sell to GE the patented product or a product made using the patented process, and that the on-sale bar is not triggered

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<sup>8</sup> ATI characterizes Carpenter’s argument as one that “no predicate requirement of a contractual offer to sell . . . a product made by the patented process” is required to trigger the on-sale bar under the second theory articulated in Plumtree. ATI On-Sale Resp., 17. I am not convinced that this is Carpenter’s position. In any case, the true dispute between the parties is not whether the second Plumtree theory requires a contractual offer for sale or sale, but (1) whether there was a sale or offer to sell either of the 36 inch ingots; and (2) whether, if there was a sale, the product created pursuant to that sale embodied all claim limitations in the patents.

(regardless of which theory articulated in Plumtree applies). Specifically, ATI claims that the letters were not offers for sale (1) because they referred repeatedly to “development work” and expressly stated that no material would be shipped; (2) because they did not set forth the claim limitations;<sup>9</sup> and (3) because other evidence supports the claim that the quotations were for development work only, such as the fact that the price paid, \$70,000, “was part of the cost share to offset a small portion of the developmental expenses.” See ATI On-Sale Resp., 13-14.

ATI and Carpenter dispute both whether there was an offer for sale and what the subject of any purported offer for sale *was*. ATI argues that because the materials produced to GE pursuant to the terms of the letters were developmental in nature, the letters could not constitute offers for sale. At oral argument, Carpenter urged that ATI’s focus on the developmental nature of the products is inapposite. A sale is “a contract between parties to give and pass rights of property for consideration which the buyer pays or promises to pay the seller for the thing bought or sold.” In re Caveney, 761 F.2d 671, 676 (Fed. Cir. 1985). “[T]hat [a] sale . . . was made in the context of a research and development contract . . . does not suffice to avoid the on-sale bar.” Zacharin v. United States, 213 F.3d 1366, 1370 (Fed.Cir.2000) (“A contract to supply goods is a sales contract, regardless of the means used to calculate payment and regardless of whether the goods are to be used for testing in a laboratory[.]”); see also Sparton Corp. v. U.S., 89 Fed.Cl. 196, 219 (Fed. Cl. 2009) (“An offeree’s view on the development status of a

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<sup>9</sup> ATI’s second argument is meritless: if the letters were offers for sale and if the products produced pursuant to the letters inherently satisfy the claim limitations, the letters need not have expressly set forth the claim limitations to fall under the second theory articulated in Plumtree. See 473 F.3d at 1163. But, the letters must have constituted offers for sale.

device it purchases is simply not a factor courts consider in an on-sale bar analysis.”).

Carpenter argues that the purpose of the sale was unequivocally commercial in nature and was directed at the sale of the patented process to GE.

The parties present the Court with opposing facts as to whether there was an offer to sell. In the quotation letters, ATI states that it “will produce an ingot utilizing three VAR melt rates,” describes specific characteristics of the ingot that will be created, and quotes “a price for this development effort.” In response to the first letter and on October 19, 1999, GE faxed Mr. Kracke what it designated a “purchase order” for “36 inch 718 ingot development,” identifying itself as the “purchaser” and ATI as the “seller.”

Carpenter On-Sale Mot., Ex. F (referencing “[ATI] quote dated September 14, 1999.”).

ATI argues that despite the use of language indicating the willingness of ATI to sell and GE to buy the subject ingot, that ingot could not have been commercially viable and therefore does not trigger the on-sale bar. ATI claims “there is no evidence that any ingots were shipped pursuant to the quotations.” ATI On-Sale Resp., 14. It points to an internal ATI document showing that, instead of shipping a 36 inch ingot, it shipped “two 10-inch diameter UT indications as forging units.” ATI Resp. To Carpenter On-Sale SMF, ¶ 88 (citing Carpenter On-Sale Ex. E). In its own motion for summary judgment that the on-sale bar does not apply, ATI addresses at length the GE qualification process used when purchasing ingots from ATI. This “qualification process” included “submission of evaluation results from the cut-up of at least one production size experimental ingot, the submission of a manufacturing process plan . . . and the submission of a pilot lot of ingots.” ATI SMF in Support of On-Sale Mot., ¶ 17. ATI

also claims that, because the ingot produced pursuant to the orders utilized three different melt rates, it could not have been for commercial use. It cites the declaration of Ms. Bond that “ATI would not and has never melted an ingot for commercial use with three different steady-state melt rates.” See Bond Decl., ATI Opp’n Appendix, 20. Finally, ATI claims that the quotation letters “made no reference to process specification numbers or to any GE-approved manufacturing process plans.” Bond Decl. ¶ 8. When selling ingots to GE for commercial use, ATI claims, it had to comply with GE process specifications and undergo a qualification process, neither of which occurred in connection with the two quotation letters. Id. at ¶ 8.

ATI additionally argues that this Court should consider industry practice in determining whether a commercial offer has been made. ATI claims that industry practice required the submission of a manufacturing process plan and a pilot lot before a commercial sale of ingots can be made. See Lacks Indus., Inc. v. McKechnie Vehicle Components USA, Inc., 322 F.3d 1335, 1348 (Fed. Cir. 2003) (reversing lower court’s finding of invalidity due to the on-sale bar because it failed to consider whether evidence of sales practice in the relevant industry would assist in determining whether pre-critical date sales promotion activities constituted commercial offers for sale). On the other hand, ATI argues that there was no sale because (1) the ingot sample sent pursuant to the terms in the quotation was not commercially usable because it utilized three different melt rates; and (2) it was not commercially usable specifically for GE because ATI had not followed GE’s manufacturing process plans prior to sending the ingot sample; (3) the

price of the developmental work, \$70,000, was so far below the actual price of a commercially viable ingot (\$400,000) that it could not have been viewed as such.

Carpenter argues that, regardless of “development” labels or whether an actual ingot was shipped, ATI undoubtedly made a commercial offer for sale of an ingot sample to GE, the ingot that was produced admittedly reduced to practice the claimed invention, and it was admittedly complete before the critical date. Carpenter argues that the quotations, on their face, are offers to sell to GE, at the least, development products for 36 inch 718 Alloy ingots. Further, at least one ingot that was produced as part of this development effort reduced to practice the claims in the patent. And even if the ingot was “developmental” in nature, “the thrust of the on-sale inquiry is whether the inventor thought he had a product which could be and was offered to customers, not whether he could prevail under the technicalities of reduction to practice[.]” Petrolite Corp. v. Baker Hughes, Inc., 96 F.3d 1423, 1427 (Fed.Cir.1996).

I find that the parties have presented genuine issues of material fact as to whether there was an offer for a commercial sale. There are multiple material facts that demonstrate whether there was a sale or offer to sell either of the 36 inch ingots. ATI and Carpenter have both presented issues of material fact to dispute both whether there was an offer for sale such that a reasonable fact-finder could return a verdict in favor of either ATI or Carpenter on the issue of the on sale bar. Summary judgment is therefore inappropriate for the on sale bar of the 36-inch ingots.<sup>10</sup>

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<sup>10</sup> ATI may escape application of the on-sale bar by showing that the experimental use doctrine negates these sales. See Allen Engineering, 299 F.3d at 1352. However, as set forth above, I find there is a genuine issue of material

#### **IV. CONCLUSION**

Both ATI and Carpenter have set forth disputed issues of material fact as to whether there was an on-sale bar of either the ‘564 or ‘858 patents. After a careful review of ATI and Carpenter’s well-written motions, I find that there are disputed issues of material fact that the alleged inventions of Claims 1-11, 13, 14, 16-18, 21, and 27-31 of the ‘564 patent and Claims 1, 3, 5-8, 13-16 of the ‘858 patent were on sale by ATI more than one year prior to the filing date of the patents. Therefore, neither ATI or Carpenter are entitled to judgment as a matter of law and both ATI and Carpenter’s motions for summary judgment are denied.

An appropriate Order follows.

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fact as to whether there was an offer for a commercial sale. Therefore, I will not address the experimental use exception.